

The University of Chicago

ASPECTS OF THE PROBLEM OF
THE PAST

A PART OF A DISSERTATION SUBMITTED
TO THE FACULTY OF THE DIVISION OF
THE HUMANITIES IN CANDIDACY FOR THE
DEGREE OF DOCTOR OF PHILOSOPHY

DEPARTMENT OF PHILOSOPHY

1931

By

ALFRED TONNESS

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In the history of philosophy up to the present time the problem of the past has received only slight attention. Naturally, then, references to it, inclusive of the present study,¹ are frequently cloaked in ambiguities. It remains for later attempts to point these out in the interest of clearer thinking.

The ensuing section is developed as a suggested beginning of this further work. The suggestions do not for a moment presume to exhaust the field; they are offered merely as examples of the work which may still be required for a completeness of treatment. If these illustrative suggestions serve to promote our understanding of this fascinating field, the present writer will feel gratified.

A. The Distinction between the Two Definite Aspects of Problem of the Past

Upon serious consideration the problem of the past presents two aspects so conspicuously that they almost become two definite and separate problems--the metaphysical and the epistemological. In the realist thinkers, as expounded above, this distinction was not recognized. It seems fairly obvious, however, that the failure to make or to recognize the distinction is responsible for much of the inadequacy of treatment of the past, as reflected in the above-mentioned writings. With Mead's more fully thought out presentation the distinction begins to appear--in his emphasis upon "the cognitive structure" of the past. It may be well to devote some consideration to this distinction now.

From the standpoint of the problem of the past we may begin by distinguishing between the metaphysical reality of the past and its epistemological reality, and the distinction may be

¹Part I of this study was devoted to a consideration of the metaphysical views of the past as found in the realists John Laird, Samuel Alexander, A. N. Whitehead, and C. D. Broad. The present section owes much to the treatment of the past given by George H. Mead and follows in the thesis itself after a detailed discussion of Professor Mead's views. Professor Mead's treatment may now be found in The Philosophy of the Present, ed. by Arthur E. Murphy (Open Court Publishing Company, 1932).

formulated as follows. Metaphysically, what reality can be attributed to the past as existence? Epistemologically, what reality can be attributed to it as a field or means of orientation? In other words, can we ascribe both metaphysical and epistemological reality to the past?

Before entering upon the attempt to clarify this situation, the meaning here given to reality calls for a measure of elucidation. I am following Mead in my reluctance to attempt a presumptuous definition; my statement pretends to be no more than a hint, for the purpose of rendering the sequel more intelligible. Reality is that which functions within a reference system, including the system itself. It matters not what the particular system may be. It may be an electro-magnetic system. A Beta-particle shot out of a radio-active body into water-vapor, is a reality in the system which defines the movement and velocity of the particle; that is to say, the Beta-particle is a functionary of that system. But let us assume another system, say, that of a furnished room. Here the Beta-particle is not a functionary, and, hence, not a reality; whereas the various pieces of furniture which did not function in the electro-magnetic system are here the functioning entity, and, therefore, the realities of this system. The present statement of reality, then, does not seek to equate it with existence. Regardless of whether or not attempts to predicate existence of a non-experiential realm may be deemed successful, the point of emphasis is that realities are so determined by the systems within which their actualities are affirmed or countenanced. Other philosophical positions may urge that an object has reality or reality-aspects other than that which is required by the definition of a particular system. The answer, from the present standpoint, is that those aspects do not become realities except in the systems within which they are required; the existence of those aspects or their possibility of existence in a system in which they are not requisite to the object as a functionary within the system, does not in and of itself admit them to the reality-status. For illustrative purposes, let us assume the presence of a chair, and also, for the sake of simplicity, consider it in only two systems. One system is that which is described by the domestic situation; the other is the logical one of tables and not-tables. In the former system its reality is that which we usually associate with that particular piece of furniture in a home; in the latter its reality takes on a form of abstract negation as involved in its exclusion from an arbitrary selection. In the former system its reality is not that of abstract negation but its practical usefulness in the home; in the latter the reverse order obtains. Both realities may become simultaneously actual; I may enjoy the chair while instituting my

arbitrary logical classification. This, however, is not a merging of realities into one reality; there still remain two realities as simultaneously recognized in the two systems of their determination. That is, as thus considered the two realities do not overlap; each reality is clearly drawn and definitely determined by its own system; it is a reality only by reference to its own system. The recognition of the two realities carries with it the implication of the two distinct systems within which alone each can become a reality. This merest sketch of a difficult topic is lamentably incomplete; but no further elaboration seems justifiable at this point.

The position represented in the immediately preceding paragraph reflects a background, though by no means the only one, for the distinction between metaphysical and epistemological reality. Assuming a spatio-temporal occupation, its reality in the metaphysical system, that is, "from the standpoint of" metaphysics, is not reality in the epistemological system; and vice versa. The two are different reference systems, each defining its own realities. The genius of the metaphysical system is the actuality and structure of existence or being; its realities are, therefore, determined in terms of this actuality and structure. The genius of the epistemological system is the possibility of conscious orientation, the implications involved in this orientation, and consequences issuing therefrom; the realities of this system, then, are determined by the characters of this orientation.

The problem of the past, then, is actually two problems, and the reality involved in the consideration of the one problem cannot well become identified with that of the other without blurring the whole field of the major problem. The metaphysical problem is reflected in the question: What existence, if any, can be ascribed to the past? The epistemological problem forces the issue: What validity can be attributed to the cognitive past, and how is this validity established? The realist writers expounded in this dissertation have been chiefly concerned with the metaphysical problem, whereas Mead was mainly occupied with the epistemological. The realists referred to the cognitive aspects, but apparently without recognizing their implication of a distinctly different type of problem. With regard to Mead it may be said that he would, perhaps, not wish to label his field of interest here "epistemological"; and this chiefly because of his intense social interest. He seems to have recognized the distinction between the two types of problem; but he unhesitatingly declared in favor of realities which could become identified with "sociality," with only a minor interest in metaphysical implications. To him

the realities which we can "talk about" have experiential characters, and belong, therefore, only to that one large classification; metaphysical realities have "meaning" only in so far as they can be drawn into the experiential realm. He wished to avoid as far as possible the connotations of both the "metaphysical" and the "epistemological," as these have developed in the history of philosophy. The realities which have "meaning" belong within the field of experience, and the problems involved in the approach to these realities are, in his thinking, rather to be called scientifico-social. There was here no denial of problems and realities which do not have this "meaning"; but these were beyond the most active interest of Mead.

The present writer frankly acknowledges that Mead's position seems sound to him. Yet, there seems to be a need of going a step further. The fact of the philosophical situation of today is that the problem of the past is hinted at or definitely stated in metaphysical terms or with metaphysical implications--whether or not this can have any experiential meaning. Consequently, the step which seems to be required is to single out this metaphysical problem for consideration; to leave it out, or to confuse it persistently with the epistemological problem gains nothing and sacrifices progress in thinking. At the risk of some repetition of earlier statements, the metaphysical reality, if any, of the past must now be considered, as distinctly set over against the epistemological problem and its reality.

1. Metaphysically, the past as a segment of time has no existence, and in this sense can, therefore, have no reality. This non-existence it shares, of course, with the future.

The concept of time is an abstraction which has developed out of naive racial habits of thinking; it has continued to retain the large divisions inherent in this untutored thought, namely, the past, the present, and the future. Now, it is obvious that the concept of time is based on realities, but upon consideration it is equally obvious that the concept must be radically revised in accordance with the realities upon which it rests; and it is not even necessary to enlist the aid of the modern electromagnetic relativity doctrine in order to obviate this revision of concept. The obvious origin of the concept is the recognition of distinctive features as they occur in the activity of the natural processes; and the equally obvious fallacy is to extend the concept beyond this existential activity with the tacit assumption that this extension is supported by the same existential validity as the origin of the concept. This recognition leads to the necessary distinction between the concept of time and time itself.

Intelligence cannot be denied the privilege and enjoyment of a concept which stipulates past, present, and future as its constituent elements--if it so desires. But time itself, such time as may be ascribed to the natural processes, does not conform to this abstraction. Inasmuch as time is an intellectual abstraction, it is difficult to make a statement about it without incriminating intelligence; this, however, should constitute no problem, for intelligence is within and a part of the natural processes, so that the involvement of intelligence is the involvement of a phase of the natural processes.

That which I, for purpose of distinction, called "time itself" does not include, because it has no room for, the past and the future. It is only an affair of the present, for it is only an affair of the natural processes in their activity. As pointed out in various connections above, activities and "events" are the characteristics of the present and cannot be thought of as in the past, from the standpoint of metaphysical reality. An activity either is or is not; it clearly is in the present, but its completion immediately stamps it as an activity which is not any longer. The action is completed when the continuity of a strand in the natural processes reaches its end or is interrupted; Whitehead's completion of the "pattern of the event" would mean almost the same, if his "event" could always make room for the energetic action element in the natural processes. The unit of activity in the natural processes may be of shorter or longer duration, depending, of course, upon its "pattern"; and each such unit reflects an expenditure of energy. This energy seems to be the propelling element whereby nature becomes a "process." The various ramifications which the concept of energy makes possible are beyond the scope of this study. The point of importance is that the expenditure of this energy takes place--so it seems--in the activities by means of which we can trace the processes in nature. The actual expenditure of energy in nature's activities is the present, and the direction taken by these energetic activities is "time itself."

By "time itself," then, is denoted the metaphysical reality of time, that is, its existential structure. This must not be interpreted as a superstructure upon the processes. The nature of time is found in the direction of nature's processional activities; this does not mean that there are two existences, time and nature's processes; it does mean that the direction of the activities of the natural processes is that which intelligence calls time. The reality of time, then, is as actual as the reality of the direction of the processes. An illustration may serve to make the point clearer. I sit by the sea-shore and watch the

majestic waves rolling in until they break on the shore. Singling out one such wave, I observe at least two things in the motion of the wave, action and direction. The abstract direction is insufficient for time; but so also would be the action without direction. Suppose we could abstract our presence from the situation and watch it without our feeling of duration between occurrences, and suppose, further, that instead of the continuous wave there were sudden irruptions, each one distinct and complete in itself and each tracelessly lost before the next occurred, and suppose, finally, that no order of any kind were apparent. There would then be as many activities as there were occurring irruptions, but no direction. Each activity would occur in its own present, but there would be no continuity between that present and the present of another irruption. This complete disjunction would undermine one of the foundations of time. We are accustomed to think of relations as of fundamental importance to time; but relations are impossible without a continuity by which the factors may become related. If all of nature were perfectly discontinuous or chaotic--whatever such a state of existence may be imagined to be--there could be no time, for the continuity involved in the direction of a process would be absent. Illustrations are plentiful; they are supplied by observing any moving object, say, an automobile. The directed activity as involving continuity in the active direction, is time in its concrete form as identified with the natural processes. It is this direction of nature's activities which has become basic to measurements as developed by intelligence; but it is important to note that our clocks--all the various types of clocks--are results of intellectual arbitration.

The metaphysical reality of time, then, is the metaphysical reality of the direction of the natural processes. The formulation of an idea, the growing of a plant, the deposition of sediment in the river's bed, the 'flight' of the comet across the sky, are some of those natural processes whose directions constitute the reality of time. Now, the activities involved in these directions are in the present, and not in the past; indeed, these activities are the present. The present may, thus, be distinguished from time. Metaphorically, time rides the crest of the moving wave, but the action involved in the structure of the wave and its motion is the present. An irruption in an otherwise motionless existence, is the present, for it is an action. An action could not occur without a process, for it involves two or more stages for completion. Popularly--and in this case also correctly--we would say that the action requires time to complete itself. In other words, action involves that direction which constitutes time in order to stage its successive parts. Each state of the

action emerges and disappears as the "pattern" is being traced out. The "pattern" itself is incomplete at any given stage; what appears of it is only that part which is identified with the part of the action which is now being staged. The actual staging of action in any one of its parts is the present; the present is energy spending itself in action within the natural processes. The present, then, is as real as the action by which it is determined; and as the present is an action which involves direction, time is dependent upon it for its own structure. That is, the action is as continuous as the involved energetic expenditure demands; this continuation takes the direction which constitutes time. However, it may also be viewed reversely; the action must have the promise of continuity in order to stage its various parts; thus, its possibility makes a requirement of the natural processes --it requires time to complete itself.

The conclusion now becomes apparent. Time has already been characterized as the direction of activities within the natural processes, and the present as the staging of these activities. Time may now be said to be the continuity of the present--or, as Mead would say, the passage from present to present. The reality of time is found in the reality of the continuous present; and the reality of the present is the reality of the directed activities in nature. The most natural conclusion is that the past and the future are excluded from these metaphysical realities. The completion of any unit of action is the boundary between the present and the past; it also marks the disappearance of the action from existence. The action has not even a shady past; its completion is also its extinction. Any part of the action as now staged may imply an earlier stage, as it may also imply a later one; and the rounding out of its last stage may imply all of its previous stages. But these implications cannot be equated with metaphysical existence; and the implication itself does not require the actually continued presence of the entire "pattern" in a simultaneously co-ordinated metaphysical existence. The difficulties here involved have been pointed out in an earlier part of this dissertation. Nor can the reality of the past be salvaged by describing the past as a "boundary," "horizon," "fringe," or such similar terms. These are legitimate metaphors, if not pressed too far; but the metaphysical realities to which we refer here do not fit the metaphors.

Mead ventured that the past is in the present as a conditioning of the present; the process itself involves a conditioning structure. We have seen, however, that he did not interest himself in the metaphysical aspects of the problem, and the conditioning character was such as our scientific-social pre-

occupations ascribe to the situation. But the questions may well be raised as to whether or not such conditioning exists in the present, and if such existence can in any sense be called the metaphysical reality of the past. The first question is easily disposed of by answering it in the affirmative. The present is action, and action has a scene or setting; the setting referred to is that of the on-going natural processes. The relation between the action and its setting is much like the relation between the organism and its environment. Just as the environment of the organism is involved in the organic processes, so the setting of the action is involved in its perpetration or emergence. The action cannot take place 'in vacuo'; it is possible only in a setting. The setting is one of concrete existence, and this stage, then, is the necessary framework of the action. Its involvement in the action establishes its metaphysical reality; it is a necessary functionary within the system of present reality. This conditioning, therefore, not only exists in the present, but is so inextricably woven into its texture that it becomes a part of the reality of the present.

In so saying, the answer to the second question has also been made. Conditioning cannot be a metaphysical reality of both the present and the past; its inclusion in the former carries with it its exclusion from the latter. If it be urged that the conditioning of an action may be traced to a distant early stage in the process, at least two suggestions can be offered. First, this tracing of conditions quite obviously means to leave the metaphysical problem behind in favor of the epistemological; the establishment of conditioning beyond the immediacy of the conditioned action is a cognitive task. Secondly, suppose it were possible to reinstate the earlier stage within which the strand of conditioning continuity is alleged to exist; there would still be no past as a metaphysical reality. Not only is it necessary to maintain that all conditioning in every stage of the process is a present reality, as just indicated above, and therefore never can be a past reality; but the further consideration presents itself that action itself is the most important conditioning of further action, which again excludes the past from metaphysical reality. If again it be urged that there actually was an earlier stage in the process and that it is now past, the first rejoinder is that this insistence reflects once more the tendency to drift into the epistemological problem--to which our attention will soon be directed. Moreover, this insistence reveals the seemingly ineradicable vestige of naive thinking which still haunts the modern and technical thinker; its displacement is, perhaps, as difficult as the displacement of the old space and time systems and the

substantiality of matter. Metaphysical reality does not countenance the earlier stages which "were"; the reality of time does not include the present which "was," for this reality we have found to reside in the continuous direction of nature's activities which are, to the exclusion of what "was" or "will be." The so-called earlier stages of the process are not metaphysical reality, and but for our cognitive constructions, we could not even think them because of their absence from the active process. They do not belong to the metaphysical reality of time, and to say that they are past is only tantamount to the declaration that they are not a part of metaphysical existence.

2. The epistemological reality of the past must now be considered. That this presents a quite different problem than the one just discussed, will soon become evident. Here may be the best place to indicate the alignments of the two different problems. If we assume the validity of the traditional divisions --past, present, and future--as the major divisions of time, we are soon confronted with the disclosure that the two major problems are not both set by the same divisions. The metaphysical problem is almost exclusively the problem of the present, and the epistemological problem is preeminently that of the past and the future. This fact, then, is the justification for the earlier statement that the two aspects of the problem of the past are actually two distinct problems. The metaphysical problem results, positively, in the establishment of the reality of time, and, negatively, in the denial of the reality of the past (and the future). The epistemological problem is concerned with a qualitative structure which may be given the name "past." The relation of this "past" to the present should become clear in the following discussion.

A cognitive structure is developed by intelligence; intelligence, here, is not meant to denote the quality which characterizes the organized mental processes, but merely the ability of conscious adjustment with a view to better orientation. It is desirable to state briefly the relation of intelligence to the cosmic environment. Mead has presented the biological mechanism of this relation so fully that its restatement is superfluous. The emphasis to be made here is that human nature is an integral part of cosmic nature, that mind is in human nature, and that it, therefore, is a part of cosmic nature. Inasmuch as intelligence is a noteworthy characteristic of mind, indeed, a distinguishing feature of it, intelligence is a part of cosmic nature; and the operations of intelligence are phases of cosmic activity. In experience cosmic nature assumes the form of a process, and we are

now accustomed to think of the cosmos, or any fragment of it, in terms of natural processes. So ubiquitous have these processes become to our ways of thinking that the experience within which they appear is itself regarded as within the processes. That is, the natural processes are featured, in part, in experience; experience is in the nature of the processional activities of nature. We may say, then, that experience is the natural processes in consciousness; and thus, consciousness is the experiential equivalent of nature and its processes. Intelligence, which comes to light within experience and as a part of it, cannot, then, be divorced from the natural processes; it is as definitely and inseparably a phase of these processes as are chemical elements, atomic energy, stratifications, and the bodies adrift in astronomical space.

Clearly, experience is a metaphysical reality, as this term has been employed above; for it is in the nature of the processional activities as these appear in consciousness. Consciousness is a situation in which organic activities come to their own--or, in physical terms, consciousness is the reference system which by its peculiar characters determines its own realities, and these realities are in the form of organic activities. The realities of this system are not to be confused with, say, the realities of a chemical system, or those of an electro-magnetic system. The realities of the consciousness-system can be recognized by an element of intelligence, which is peculiar to consciousness. Consciousness, then, is a behavior situation which displays organic activities in its own terms--and we call this experience. The organic activities constitute only one group or type of activities inherent in the natural processes; they are, therefore, as metaphysically real as any other activity in nature. To experience, then, may be ascribed metaphysical reality.

It is important to stress the thought that in the view of the present writer neither consciousness nor experience can be regarded as 'receptacles' or 'containers'; these terms are often convenient metaphors; but they do not describe existential reality correctly. Consciousness does not 'contain,' or is not the 'receptacle' of, experience; nor does experience 'contain' intelligence, organic processes, or anything else, for that matter. In the interests of linguistic convenience I may say that an object appears 'within' consciousness, or within the 'field' of consciousness. By this I do not mean that consciousness bears the resemblance of a definitely bounded two- or three-dimensional region. I do mean, however, that the activity of the natural processes develops qualitative characters, in this case intelligence, that these new characters are sufficiently pronounced to define a

distinct situation, namely, that of consciousness, and that any object which takes on these characters thereby becomes a feature of the situation of consciousness, thus appearing 'within' it. The situation of consciousness is defined by organic activities of the quality of intelligence; this activity, not 'content,' is its reality. Likewise in the case of experience. The organic activities are not 'contained' in, or 'within,' experience; they are the experience. They are the natural processes developed into qualitative characters of special design. Straight thinking at this point is rarely more imperative than in the discussion of our problem.

The contents of the preceding paragraphs are sufficiently obvious to warrant the brevity of treatment accorded them; they are summary statements for the sole purpose of indicating the basis for the ensuing discussion.

Consciousness, then, defined as a behavior situation, reflects the two phases of the problem of time. Its activity as a part of the natural processes is its metaphysical reality; but intelligence by which this situation is rendered distinct opens the door to epistemological reality. Intelligence is that peculiar organic activity which is able to construct references and reference systems which seem to extend beyond the immediacy of the present situation--an operation which is usually called inference. The analysis of this procedure will soon be made. Like all other activities the operation of intelligence is in the present alone. However, this operation characteristically involves a reference to something which does not seem to be a part of the operation itself, and hence apparently is not in the present. This 'something' may, for the present purpose, be called the object of reference or the objective reference, and it will bear a measure of investigation.

Experience, that is, organic activities, develops into organized responses or patterns of action. The pattern of action is the organic aspect of that which from the standpoint of the environment is the character of that environment; thus, the organized response and the character of the environment are two aspects of the same reality. The two aspects are inseparable--except for purposes of analysis; organic activity necessarily involves an objectified character, and the objectified character likewise the organic activity; that is to say, the presence of the one carries with it the presence of the other also. Now, the character of the object of reference is obviously determined by the individual intelligence, and, more ultimately, by the organic activities which are basic to intelligence; in other words, the operations of intelligence are necessarily delimited and determined

by its basic structure, the natural processes, and the objective reference is, in turn, determined by the operations of intelligence. The objective reference is indicated by a construct resulting from the operations of intelligence, and this operation is a peculiar form of responsive activity to the present situation. In this preliminary statement the peculiar form of this activity may be presented as involving the construction of a system or situation to take the place of an existential reality which in the nature of the case cannot find room in the present. The organic response involved in the operation of intelligence does not exist alone; it carries with it the complementary aspect, the character of the situation in which it is a reality. We may think of this character as the observable or objectified element of the responsive activity; and the nature of this organized activity is clearly reflected in its objectified character. These characters are the stuff of constructs, which in subsequent experience become indicative of objective references.

The particular form which objectification may assume--image or idea, percept or concept--is of relative unimportance at this juncture. Rather, the factual emphasis must be brought to bear upon the disclosure that objectification is a present organic activity. It cannot be regarded as apart from the operation of intelligence; it is the complementary aspect of this operation itself. More dramatically it may be stated as the self-objectification of intelligence--that is, the self-objectification of the peculiarly developed organic activities. Now, inasmuch as intelligence is a phase of the constantly ongoing natural processes, the self-objectification of intelligence is also in a flux; its fluctuant characters keep in step with the processional activity of intelligence in the continuing present of emerging developments. This objectification, then, is integral to the organic activity and, thus, demands the status of the present, as the present has been defined in this study.

a. But this is only the beginning of our story. So far our course has been relatively clear and easy sailing; but we have been moving almost exclusively within metaphysical reality, and inasmuch as this reality yields only time without past and future, a recognition of it alone is unsatisfactory to our intellectual demands. We are, therefore, impelled to seek clearer terms of negotiation with what we call objective reference, or inference. A few paragraphs back the statement was made that this reference seems to be not in the present but beyond it. In this 'appearing to be' there is a significance, with which there must now be a reckoning.

It is necessary to go back to the situation of conscious-

ness, where organic activities develop the ability of self-objectification--which I have called intelligence. The development ordinarily takes three 'directions'; the 'forward' direction, which we call planning; the 'backward' direction, which may be regarded as retrospect; and the 'outward' direction usually taken by logical constructions.¹ The "direction" of this development is here of less importance than its nature, and it soon becomes clear that this development is a natural experience. As the organic activities develop into their self-objectification--that is, as the consciousness situation begins to appear--the objectively reflected activities gradually assume a processional character; the organic activities involve an awareness of the processional character of their situation. Incoherent activities evolve into organized action; relatively unrelated characters gradually become related in combinations and patterns of more definite designs, and these patterns assume increasingly greater dimensions. The growth of pattern is, of course, co-ordinate with the expanding organization of action, in which the unit of action in present response is only a part of the total action. The situation of consciousness involves the ability to 'view' these larger totalities and patterns; it is self-objectification as identified with the larger totalities.

The basis of this ability seems to be in what may be called the impressionability of the natural processes. The processes seem to display not only action but also interaction. Action seems to demand reciprocity. Reciprocity may not always take the form of return action; but there seems to be a demand for some form of equivalence to the energy expended in action, and it may range all the way from a dent in a surface to the defense action of a patriotic citizenry. The natural processes, then, make impressions upon the materials involved in their activities; they are also susceptible to impressions in the sense that the processes develop strands of activities as interactional results. Impressionability is recognized in the seeming fact that these interactional results are carried within the process in its further unfolding. The situation of consciousness is an especially vivid display of this, but the keenness of the interactional drama in this field is too well known to require further statement here. However, that aspect of impressionability which involves the recording of results is of present significance. In the nature of the case impressions are preserved in the organic individual, and they become the basis for further organization of

¹These three terms are very convenient, but not entirely fortunate.

responsive activities. The impressionability of the organism is realized through its organic activities, and, thus, impressions within the organism appear in serial orders; as the impressions become actual through the organic activities, the serial order of impressions answer to the serial process of these activities. The organization of organic activity involves the ability to construct that serial process which will lead to a certain outcome. Now, the natural processes portray similarity of action-patterns. No present can charm into being a brand new heaven and earth; there is constant emergence of the new, but the attendant readjustment does not clear the scene of previous action-patterns. Every organized organic activity implies the occurrence of familiar patterns in the situation of consciousness; for the absence of such familiarity would defeat the organization of activity. Thus, the impressionability of the natural processes is basic to the organization of activities in series and patterns. In a situation of consciousness the responsive activity involves an objectification of the totality of the serial order of the pattern, or as much of it as remains, within the organism; in its self-objectification this activity is only a part of a larger pattern.

The field of the objective reference is now open to view. The reference is not in the self-objectification, for that is a character in the present situation. It is to be located in the identification of self-objectification with the larger totalities of actions and patterns; the reference is within the continuity of the natural processes, within which the self-objectified organic activities take place. In other words, the situation of consciousness is the field within which the individual, by means of intelligence, becomes identified with the on-going processes; and the method of intelligence by which this identification becomes realized is referential. It is a conscious identification in the sense that the natural processes are objectified as the situation in which the identification is realized; the situation involves an extended continuity, and the identification is only a segment of this continuity.

In the interest of clarity at this point the distinction must be drawn between the character of the environment and that which I have called the construct of intelligence; but the distinction is not intended to preclude the operation of intelligence from the genesis of the character. The point has already been made that the character of the environment is a complementary aspect of the organic activity; it is the objectification of this activity. The environment is, of course, that which is involved in the situation of consciousness. The characters are of necessity as mobile as their basic organic activities; hence, a situation

not characterized by intelligence (as here understood), yet, hypothetically, developing physical characters, would present a fleeting array of such characters of constantly shifting design. Such a situation is, however, beyond our observation, and is here hypothesized only to make the proffered distinction more clear. Over against the fleet characters we find the more permanent constructs of intelligence. The construct is a tendency to reproduction; this tendency is within the organic activity and is natural to any organic process. The establishment of an organic activity involves the establishment of its objectification, the character, as a part of its completion. When a new situation re-institutes the process involved in the activity of the old situation, the character belonging to this former situation has also a tendency to appear. The organic activity in the new situation, however, involves its own new character, which leaves no room for the actual recurrence of the character inherent in the old situation. The old character does not actually appear, but what is there is the tendency to reproduce it; and this tendency is the construct of intelligence. Thus, the organic activity involves not only the objectification of its characters in the present situation but also the one or several constructs. The organic continuity makes possible a recurrence of organic processes, and these have a tendency to establish structures. The recurrence of the process, therefore, tends to reproduce the character which was inherent in the earlier occurrence of the process. In this continuity of organic structure lies the permanence of the construct, and also the indication of the objective reference.

Though the construct is not the objectification of the present organic activity, it is yet a part of the activity, for it is a tendency inherent in it--a tendency to re-institute a former objectified character belonging to the same organic process. Thus, the constructs within the process furnish a contextual setting for the character, which setting is much in the nature of a background. The organic process accumulates constructs with each activity in which the process is involved; each organic activity calls into play the accumulated construct; hence, the character inherent in the present organic activity is shadowed by constructs which sustain a relation of close similarity, as well as organic continuity, to the character itself. It now becomes reasonably clear that this contextual setting of the character is the indication of the objective reference; the latter is the objectification, or character, which the process has a tendency to reproduce but cannot reproduce because of the monopoly of the situation exercised by the present character of the organic activity. The objective reference is the objectified character in-

herent in a previous activity of the organic process, which character this process has a tendency to reproduce in its present activity. Where this character is actual, it is a metaphysical reality; but in that organic activity where it is only indicated by a construct, it is no longer actual and is, therefore, not a metaphysical reality. It is not present in the organic activity, but only indicated by the construct. Here, then, is the objective reference involved in the operation of intelligence. We may summarize by saying that the possibility of the objective reference lies in the continuity of an organic structure in which organic processes recur; its inception is the organic activity actualized in a given organic process; its clue is the construct of intelligence; and its objectivity is its actuality in an earlier activity of that organic process which still continues in the present.

b. The stage has now been reached where a characterization of the epistemological situation may be attempted with a view to a determining of the epistemological reality of the past.

Objectification of the organic activity identifies the objective character with the organic process in which its contextual setting resides. Thus, the character becomes a part of a larger totality. The organic process of the situation of consciousness is extended by intelligence beyond the immediacy of the situation, the situation expanded into a larger environment; this is accomplished by symbolic characters, such as words, and symbolic constructs, such as abstract ideas or concepts, which have accumulated in the various organic processes. This extension of processes and expansion of situations assumes the form of serial orders. The suggestion was made above that the primary serial order is instituted by the organic activities in their processional occurrence. The constructs owe their serial form, first, to the serial order of the organic activities by which they were instituted, and, next, to the necessities of existence. By the latter statement is meant that just as, in the metaphysical world, distinctly different situations belonging to the same reference system cannot be merged in each other so as to render their individualities extinct, so also in this world--which I shall be calling epistemological--distinctly different constructs do not lose their identity through superimposition; this distinct individuality despite structural fraternity and contiguity necessitates the serial order. The initial series is relatively simple. Into this are fitted new constructs; the constant introduction of constructs requires the extension of the series, and may also demand its reorganization. The serial ordering of con-

structs takes its cue from the continuity of the natural processes as reflected in the situation of consciousness, and upon this continuity it reaches beyond the immediate situation. Because of the continuity in the processes, intelligence is able to confer the appearance of reality upon the series as series. This seeming reality is then re-enforced by the ability of the construct to fit into the already existent serial order to which it seems to belong.

We have, then, the field of consciousness in which are involved both a situation and a process (where the singular "process" may represent the totality of processes within this situation); we have, further, the extension of the process and the expansion of the situation; and, finally, there are the characters and the constructs by which this enlargement takes place. Inasmuch as this situation is a processional one, the term 'situation of consciousness' here always connotes process. The point to be emphasized is that both the character and the construct result from the operation of intelligence, and that these two represent not only the continuity of this operation but also that more fundamental one upon which the operation of intelligence rests, namely, the continuity of the organic processes. Environmental characters appear as aspects of organic activities when the latter develop the ability to objectify themselves; this ability marks the rise of intelligence, and the characters have been called the self-objectification of intelligence. However, intelligence is marked by a further ability, namely, that of developing constructs out of characters; this, too, has been noted above. Now, the completion of the character is, actually, the genesis of the construct, and so complete is this continuity that the exact line of division is very difficult to detect; thus, for example, the continuity between the percept and the memory-image is so thorough as to foil most attempts at psychological dissection. Organic activity, then, is the operational field of intelligence. By this operation characters appear, which give rise to constructs; by this operation, also, the constructs build out from the immediate situation into an expanded one which takes the form of a reference system. Thus, this larger reference system is pivoted upon present organic activity, and this activity is the center of the system. Intelligence, then, develops into a method of orientation. The organism is a part of a continuous process, but as a mere "part" of this process it can institute no orientation. Nor does it find itself oriented. The development of intelligence is the beginning of its active orientation; for intelligence develops the characters and constructs by which such orientation can take place. And the method of orientation

is to spread out the immediate situation into a larger system, which latter in the very nature of the case cannot find room in the metaphysical present.

The situation of consciousness, then, is the field of orientation, and the situation is rendered distinct because of the operation of intelligence. It must be clear by this time that this is quite definitely a qualitative situation; and at least two considerations must be urged. First, the environmental construction which intelligence develops can only be a symbolism; it is a representation of metaphysical realities which are not in the present, and, moreover, which cannot be. The activities of the natural processes complete the present as a metaphysical reality; the larger environment developed by intelligence involves an extension of processes which, if drawn back into the present, would become a superimposition upon this present. But this cannot be effected because of the completeness of the present which, therefore, precludes all such superimpositions. The larger environment is, therefore, only symbolic of the processes within which intelligence actively identifies the organic activities. Secondly, characters and constructs are peculiar to individual intelligences. These peculiarities become characteristic of the reference systems themselves. But the point is too obvious to labor.

It is this qualitative element which makes the situation an epistemological one; the epistemological reality is a qualitative reality. A summary statement of this reality may not be amiss. Whereas metaphysical reality must be stated in the existential terms of the now on-going natural processes, epistemological reality must be stated in the orientational terms of a reference system which transcends the present activity of the processes. Metaphysical reality is a functionary within the existence-system of the actually on-going processional activities; epistemological reality is a functionary within a reference system. While metaphysical reality does not necessarily involve an organism, epistemological reality always does; the former reality carries with it no connotation of orientation, but the latter does. That which fits into a reference system by that very fact becomes an epistemological reality, for it, thus, becomes a factor in the orientation of the organic activities upon which the reference system is pivoted; and even if further experience or experimentation may discard the present functionary, it still retains a reality-tinge, though its reality is now negative, for its negation or expulsion has entered into the structure of the reference system itself--and the reference system is also epistemological reality. The reference system, then, is one of orientation, and the chief feature of this orientation is an order, or

orders, extending 'out' from the activity of the present. Thus, epistemological reality is to be found chiefly in this reference system, which is extended from the present into a field outside the present. The last statement is made for rhetorical effect, but it requires qualification.

Metaphysically, there is no "field outside the present"; this has been emphasized above. But this is also true epistemologically, though here in a different sense. The epistemological present is wider than the metaphysical. The metaphysical present is, as we have seen, the actual and active natural processes as they 'now' occur. The epistemological present includes a reference system whose scope is not restricted to present activity. Referring to the activities of the organism--metaphysically, the present is these activities inclusive of their characters and constructs; epistemologically, these characters and constructs are only that many parts or factors involved in the reference system as a whole. The epistemological present, then, is not as narrowly restricted as the metaphysical; not activity is its criterion, but an extensive reference system by which orientation can be effected. Organic activity, thus, enjoys a dual status; on the one hand, it is a metaphysical reality; on the other, its objectification identifies it with a reference system. The characters and constructs belong both to the organic activities and to the reference system; the former phase emphasizes their metaphysical reality, and the latter their epistemological reality. Their membership in the reference system ignores their activity-aspect and presents them as factors in this system. When, for purposes of effect, we say, then, that the reference system extends to a "field outside the present," the meaning is that the system extends beyond those factors in the reference system which on their metaphysical side are the objectified characters and constructs of present organic activity. In other words, that which I have called characters and constructs of organic activities, and especially of intelligence, is the metaphysical reality of what I now call a factor in the reference system of epistemological reality; and in order to distinguish this factor from others within the same system, it might be called the pivotal factor, inasmuch as this particular reference system rests upon it so largely.

c. The epistemological reality of the past has now become reasonably clear; for the past is a reference system, and thus is a part of that entire scheme of orientational extension--'backward,' 'forward,' 'outward'--with which intelligence environs its organism. The past is that reference system which delineates a serial order leading up to the pivotal factor; isolated items

either find their entrance into some such system or are subjected to scepticism as legitimate candidates to pastness; if any given system possesses a limited structure which fails to establish direct relation to the pivotal factor, its pastness is established by its relation to, or incorporation in, the more extensive system to which the pivotal factor belongs. Now, in the paragraph above these reference systems were included in the "epistemological present," while here they are called "the past"; the contradiction is more apparent than real, but is entitled to clarification.

The epistemological present is nothing more or less than a situation of consciousness with all its recognized implications in retrospect and prospect. In other words, the situation of consciousness is a recognition of implicit relations, and the relations are grouped and named in accordance with their significance. Now, the epistemological present emphasizes the actuality of a situation in which certain characters and constructs are the pivotal factors of reference systems; but at the same time the relations involved between the pivotal factors and their respective reference systems are as clearly in view as the systems themselves. These systems in relation, then, are the past. The relations are a part of the epistemological present, the systems are a part of that present; that is, the past is a part of the epistemological present. For illustration--I am here in the process of this study. My epistemological present involves not only the present 'moment' but also, though somewhat incompletely, the historical system of characters and constructs in retrospect, all leading up to the writing of the present sentence as the pivotal factor of this system. That whole, though incomplete, reference system is actually within this present and as a part of the present. The epistemological present includes the whole system, or whatever has been preserved of it; but the past does not include the pivotal factor. This may seem bewildering; but the bewilderment is chiefly due to conventional thinking, which may need considerable reconstruction.

Convention regards the past as something distinctly separate from the present; and so, in this thinking, the present cannot be in the past and the past not in the present. But from the standpoint of the present discussion, the past--of course, the metaphysical past is excluded for want of reality--is in the present, and a slight relativistic shift would also present the present as being in the past. The past (and future), then, is only a certain kind of present; it is a classification which distinguishes the reference system from its pivotal factors. Now, the reality of any reference system must be found in its pivotal factor, and, by hypothesis, the reality of the past must have this

pivotal factor as its corner-stone. If the reference system, in this case the past, is inconsistent with its pivotal factor, we say it is 'unreal.' Regardless of whether or not this term is entirely fortunate in this connection, we do regard the consistency of a historical or experiential system with its pivotal factor as a mark of reality. The validity of the system is established by its apparent continuity leading up to its pivotal factors. It may be noted that the validity of a system is an element of its reality as functioning. The epistemological reality of the past, then, is not a reproduction of situations which are alleged to have had existence, for such reproduction is impossible. Its reality is the reference system in the epistemological present, which system is symbolic of an earlier situation in the process which 'now' is going on. Thus, the past is a functionary in the epistemological present, and, irrespective of conventional thinking, has not status of its own as an independent entity.

d. In closing this part of this section, a final point should be made apropos the relation between the two aspects discussed, the metaphysical and the epistemological. The two aspects have been involved in the realist positions, the exposition of which constitutes the first part of this dissertation; but, as stated in the introductory paragraph to this section, the blurring of the two aspects has resulted in inadequate treatments and suggestions on the problems of time and the past. The discussion which is now brought to a close has endeavored to make the distinction clear for the purpose of making the problem more transparent and soluble; how far success has attended upon these efforts will, of course, be decided by individual predilections and judgments in the task of evaluation. The closing observations now to be made will tend to give the appearance of obliteration of the results of the above analysis. If, in the interest of clear thinking, these results must be obliterated, the author of this analysis will be among the first to consign it to intellectual oblivion. It is his conviction, however, that this is not imperative, at least at the present stage of thinking upon the subject.

The distinction between the metaphysical and the epistemological aspects of the problem has been made solely for purposes of analysis; it may be regarded as a relativistic method of treatment whose value inheres only in the achieved results. The question is: How far, if at all, is the distinction representative of the actualities which the two aspects seek to express? Or, in other words, if there is a metaphysical reality as

distinct from the epistemological, what, if anything, can we say about it or think of it? Quite commonly, and far from foolishly, that which in philosophical terminology is called metaphysical reality is regarded as fundamental to that which I have called epistemological reality. 'Mother Earth' seems to have given birth to such as we; the solar system seems to have given rise to our planet; and the 'universe' seems to exhibit the processes within which the solar system has evolved its characters and activities. It seems, then, that vast existences and realities underlie our existence and reality, and that, therefore, we are, though probably imperfectly, 'miniature universes.' The apprehension of metaphysical reality, thus, brings into 'view' these extensive and intensive ultimacies upon which our existence seems to rest and within which our experience seems to have developed.

In due modesty the present writer wishes to stress that metaphysical reality is only an hypothesis, that it is a development within the epistemological present, that human intelligence cannot reach a point of observation beyond the epistemological situation, and that, therefore, the actuality of metaphysical reality cannot, at least for the present, be ascertained. This involves the practical reversal of the position expressed in the last paragraph. Metaphysical reality is not fundamental to the epistemological, but the latter is fundamental to the former.

This position is not a denial of metaphysical reality; and here two distinct points must be made. First, this reality denotes an existential actuality; but the core of this actuality lies in an ultimacy too deep for human observation. Consequently, this actuality can be neither denied nor affirmed. The result at this time is intellectual agnosticism. Secondly, an hypothesis is as real as any other cognitive object; but its reality takes on the characteristic familiar to the epistemological situation. Metaphysical reality is a legitimate classification; but it is, after all, a designation of a certain kind of epistemological reality; it is a cognitive object. One may review the whole gamut of these realities, from Plato's 'ideas' through the early modern 'substance' down to the philosophical versions of the relativity doctrine in its various ramifications--they have all developed in the epistemological present and have been ineradicably stamped with the cognitive insignia. The idealistic far-flung abstractions have been projected from an intelligence which characterizes the epistemological situation; and the realistic separation of the world from the individual has not succeeded in depositing this world beyond the epistemological realm. Metaphysical reality, then, is only a reality of special design, and the design assumes the form of the reference system; but this

reference system is an abstraction, and the abstraction is executed in the cognitive terms of the epistemological situation out of which the system was abstracted.¹

When the suggestion is made that there "must be" something more fundamental than the world of the epistemological present, a world somewhat analogous to the Kantian dingen-an-sich, the present writer can only respond by saying that no more than that illustrious philosopher can we say or even guess what such a world or reality can be; this is our actual circumstance, be it fortunate or lamentable. The only world of which we can speak or think consists of the characters of experience and the constructs of intelligence; the most flighty imagination may develop grotesque and absurd constructions, but every item which enters into these fictitious combinations has been gleaned from the situation of consciousness. If the common 'principles' involved in thinking intelligences be urged as obstacles, the rejoinder is that a solipsistic world is neither desired nor required by the present position. There is a world--or, there are worlds--and there are individuals; but the two are brought together in that peculiar something which we call experience. The world of individuals is the experiential one, and this experience is as much a feature of the world as it is of the individuals. The experiential characters and the resultant constructs of intelligence become 'common' property among organisms whose similarity of structure brings about that similarity of organic activities which are basic to these characters and constructs. The solipsistic view could claim a measure of defence, if we were to suppose a fundamental dissimilarity of individual organic structures. The considerations favoring organic similarity are varied and plausible, but cannot be urged at this juncture; suffice it to say that from the standpoint of the present position they are regarded as sufficiently healthy to rule out the solipsistic perspective.

The analyses of this section up to the present point have brought into relief the metaphysical hypothesis as involved in the realist positions. The analysis of the metaphysical aspect of the problem of the past disclosed that the past can have no metaphysical reality, whereas the realists have contended for such reality in one form or another. In this negative result, then, lies whatever value this distinction may have. The analysis, however, was one of a reference system which had been ex-

¹I think it is difficult to make a telling distinction between 'the thought of reality' and 'reality as thought (of)'; either shares the fate of epistemological construction. As far as a reality not so constructed is concerned--what can it be?

tracted from the experiential situation, and it was in this situation that the reality of the past could be brought to light. Its reality was here found in a different reference system, namely, that of the epistemological present. There is a difference in these systems, but it is not that of abstraction or no abstraction, for both are abstractions. The difference is simply one of definition. The metaphysical system was defined in terms of existence as abstracted from its experiential tinge; the epistemological system was defined in terms of an orientational field as abstracted from the natural processes. The difference of definition is rather fundamental. The latter is almost naively spontaneous within experience, the former is a technical result of a more highly developed intelligence; the system of the latter definition is intra-experiential, that of the former pretends to be extra-experiential. But the similarity of definition is found in the fact that the nomenclature of both is cognitive. Inasmuch, then, as the metaphysical aspect of the problem is implicit in present discussions of it, a rigid analysis of this aspect is not amiss. With the present writer, however, this analysis is no more than an examination of an hypothesis whose objective basis, though not implausible, is still unascertainable.

Conclusion¹

1. The past is not a part of metaphysical time; it falls outside of this time. If this time is to be determinative of the characterization of the relations between various segments within the natural processes, "the past," if retained, must be given new connotations. The past is the designation of a definite field within the epistemological present, and owes its reality to this present; its orientational function is derived from the structure of this present. In this present the past is a part of a social process, which more fundamentally is thought to be grounded in the so-called natural processes; in its operation intelligence ascribes the process-structure to the past by objectifying it in serial order.

¹The following general conclusions are suggested as a result of the preceding observations. They are an attempt to avoid the difficulties which were pointed out in the thesis in connection with realistic views of the past, and an adequate evaluation of these suggestions would require a consideration of the material (here omitted) dealing with the individual past (memory), the racial past (history), and the cosmic past (as detailed by the sciences).

2. Actually there are pasts, not "the" past. Still the term "the past" is legitimate; it may be used in a wide or loose sense and also in a restricted or more actual sense. In the wide sense it refers to the sum total of pasts in a given present, the totality of individual, racial, and cosmic reference systems which the members of a given group environment possess. In the restricted sense it refers only to those factors of the various reference systems which constitute the 'common property' of the members of the group. These elements or factors, because of their 'commonality,' assume universal forms, and thus give rise to the notion of "the" past. On either construction the past is an 'extended' intermingling or merging of reference systems which as a background to present existence is present to it; it is the landscape in which the individual and the group live.

3. The reality of the past is attested by its aliveness. This aliveness is as actual as the aliveness of the tendencies by which the constructs which constitute the past are objectified. The tendencies are parts and parcels of the live organic activities; the objectified constructs appear as alive as their organic base. The aliveness of the past is further accentuated by its active functioning; each present exhibits needs, some of which are met by the past. The past which actively functions in the present is as alive as this present.

There is a real sense in which we all "live in the past." Popular thinking tends to interpret this as a kind of identification of the individual with the past. Actually, however, it is an "identification" of the past with the individual, though "identification" thus used is misleading. The past which is so "identified" is not a past which is found, and which the individual when he has found it annexes to himself; it is a past constructed out of present materials and 'extended' upon a present pivot, but as so constructed and pivoted is claimed by the individual or the group as its past. In such a past the individual, and the group, actually lives, moves, and has a part of its being; it is the "living past" in the present, and we live in this past, for it is a part of the present in which we live.

Such an active and alive past carries with it no threat of a "dead hand"; it is not a master which holds a whip-hand over the present, but it is the willing servant of the present. At times there seems to be justification for the feeling that the "dead hand of the past" exercises a grip upon the present; this, however, is chiefly when "precepts" and "principles" foreign to the present situation are projected into it from extraneous sources. This feeling of "dead hands" only serves to emphasize

the aliveness of that past which is compatible with a given group environment; the "precepts" and "principles" of this past are the applicable means of organic orientation and are as alive as the individual or group center of the orientational system.

4. The past is a part of the totality of reality. The present is determinative of reality. The reference systems which 'proceed' from the present are further developments of its reality; thus, these developments are compatible with the reality of the present. The past and the future are such developments; as the past is pivoted on the present, the future is pivoted upon this past; that is, the strength of the future rests upon that past which is within and a part of the present. Just as we live in this past, so we also live in this future. The past and the future constitute, therefore, a large portion of the totality of reality. Man requires, as Mead would say, "elbow-room" in the present in order to realize his organic activities there; but he also seeks the sweep of a larger field within which these activities may assume significance. His search is not in vain, for he is equipped with the instrumental ability requisite for success. This larger world which intelligence relates to him is his reality; the totality of reality, all, is to him identified with this world. His "at home-ness" in this world is proportionate to his degree of success in orientation. Certainly, that part of his orientational efforts which take the 'direction' which we call "was" is of extreme importance, for it presents his life not only as an individual on-going accomplishment but as a part of a larger undertaking whose achievements belong to new levels of a life which, continuous with the present, is still to be lived.

